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## (54) Storage container and fastener assembly for cars

(57) A storage container (1) is provided with a fastener assembly (4,7) for detachably fixing the container to a vehicle seat (6). The fastener assembly (4,7) is integral with, or is attachable to—by means (5,17,18,19), Fig. 6—a frame member (15) of the seat (6). The container (1) has a back plate which, in use, lies adjacent to the front of the seat (6), with the container resting on the vehicle floor (3). The fastener assembly includes spring-biassed clips (7) which are engageable within wedge-shaped grooves (2) formed in the side of the container (1), whereby the container is detachably held in position against the front of the seat (6) on the vehicle floor (3). The clips (7) may be lockable in the engaged position as a protection against theft.

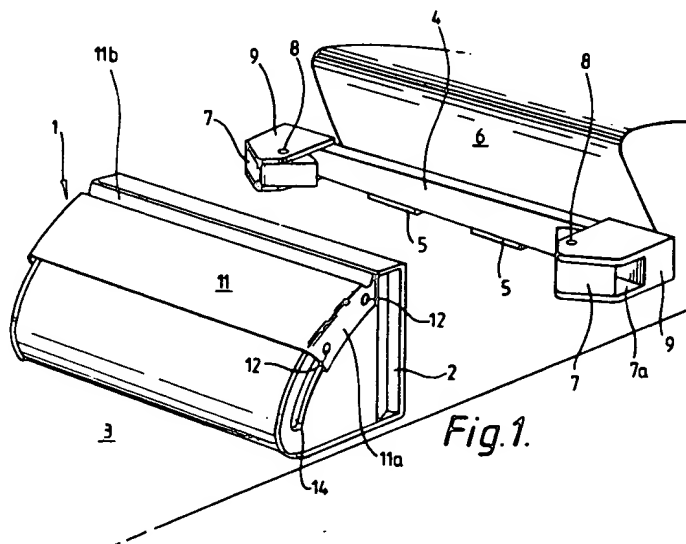
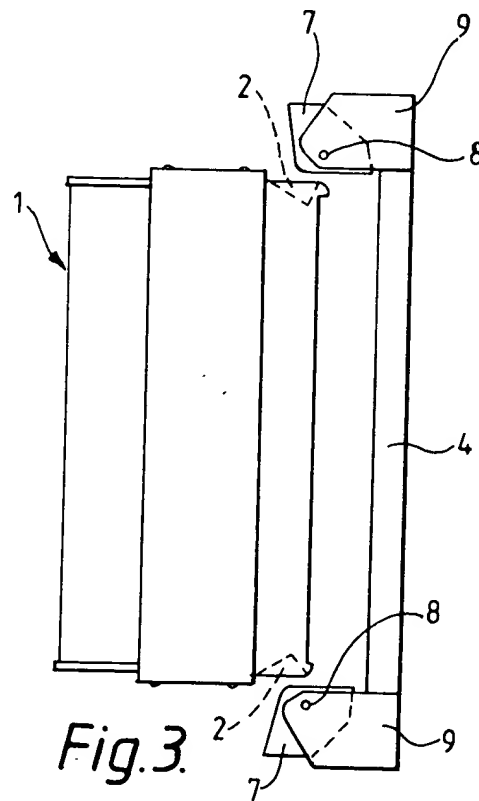
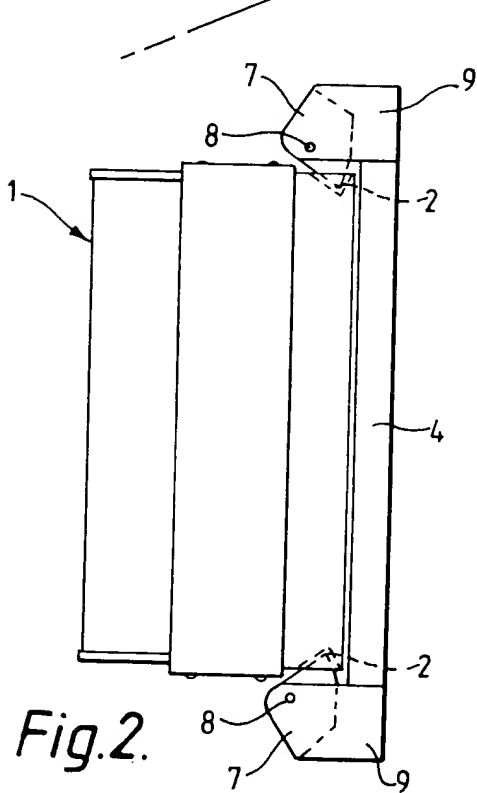
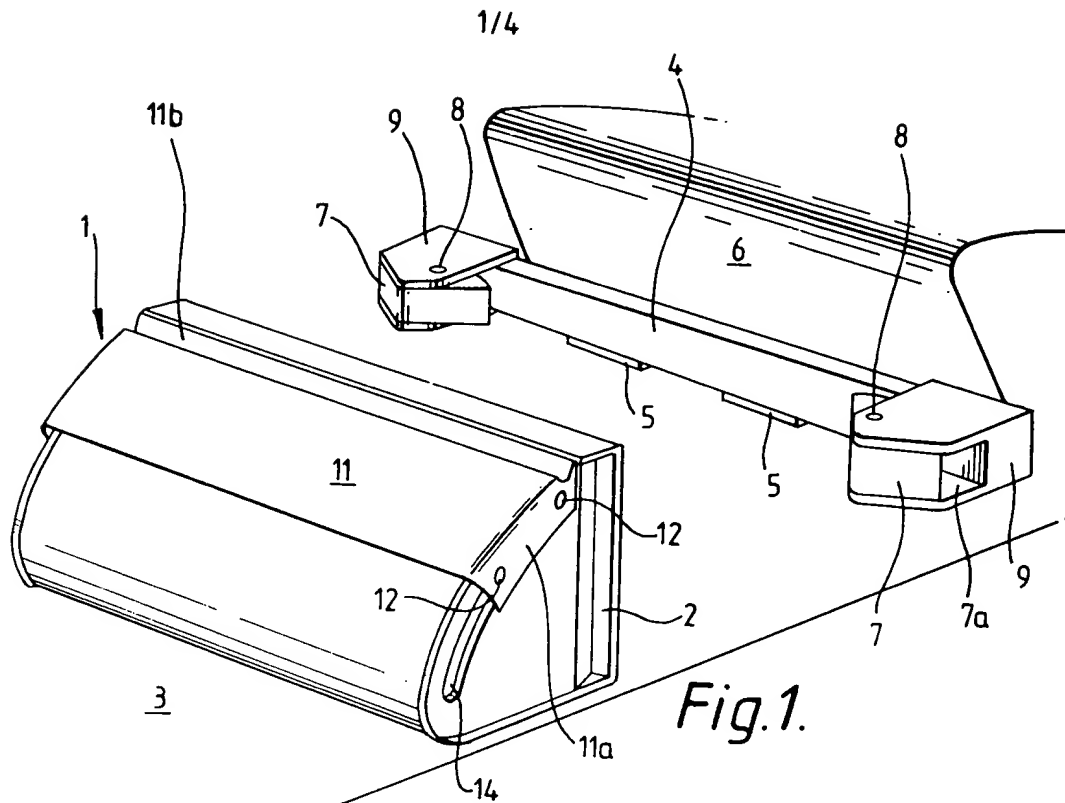


Fig. 1.

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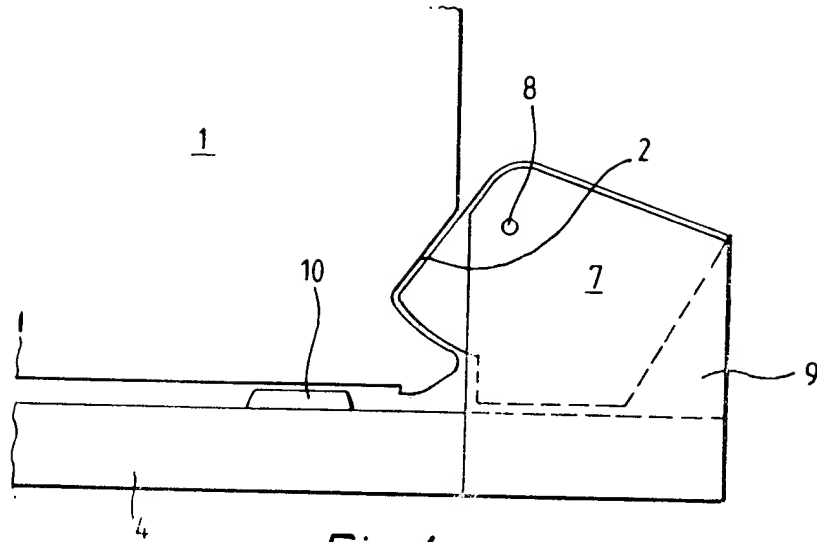


Fig. 4.

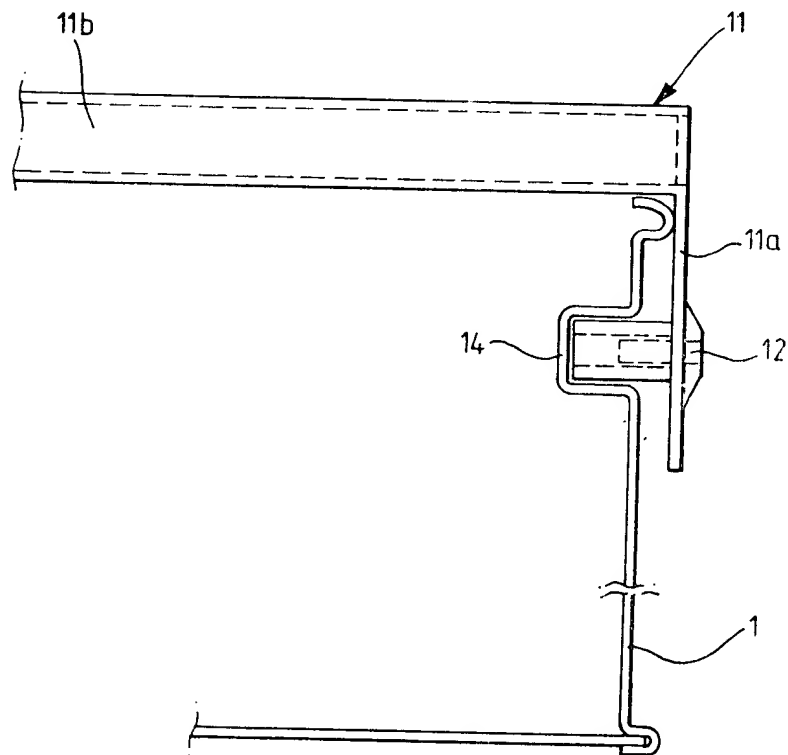
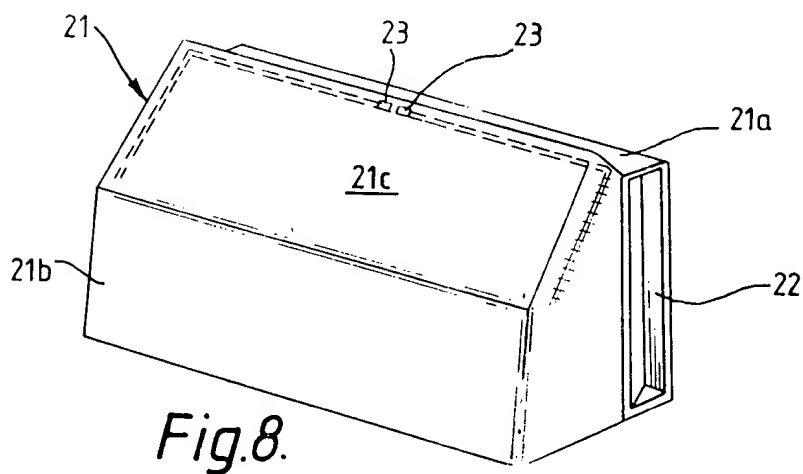
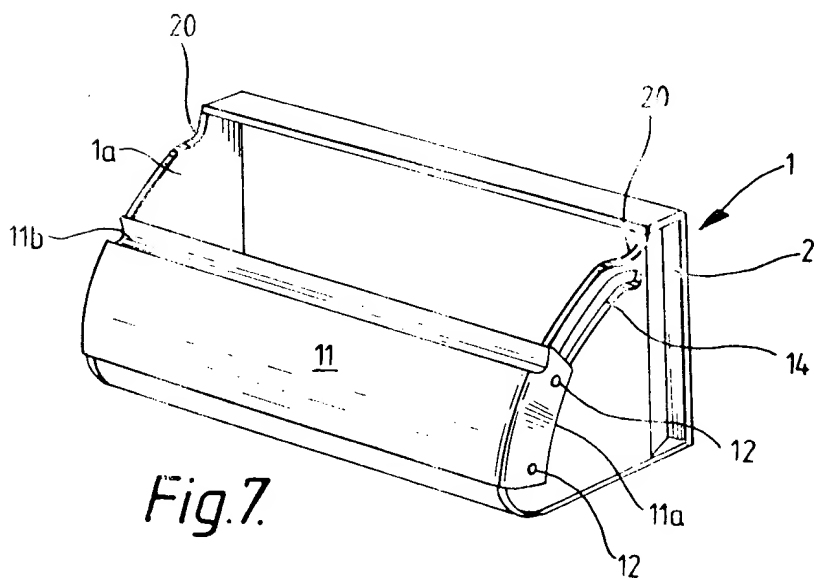
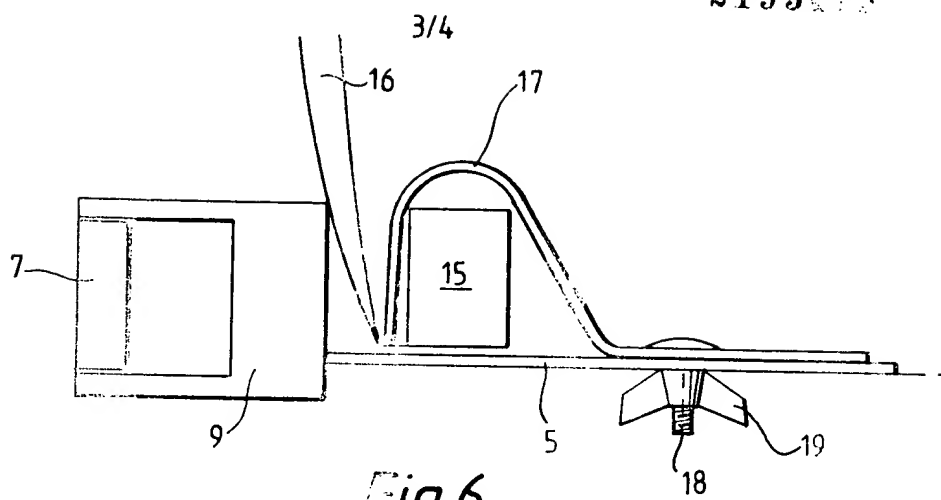


Fig. 5.



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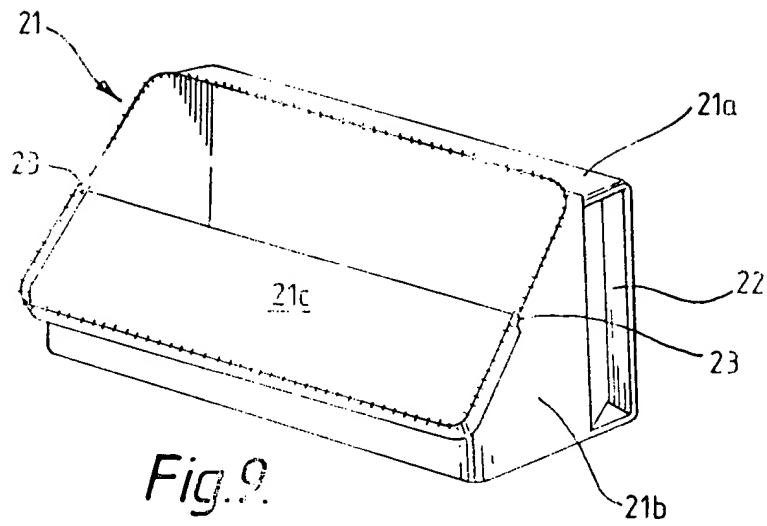


Fig. 9.

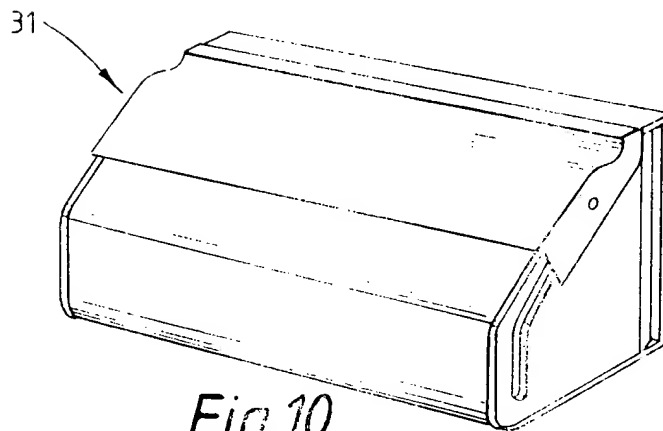


Fig. 10.

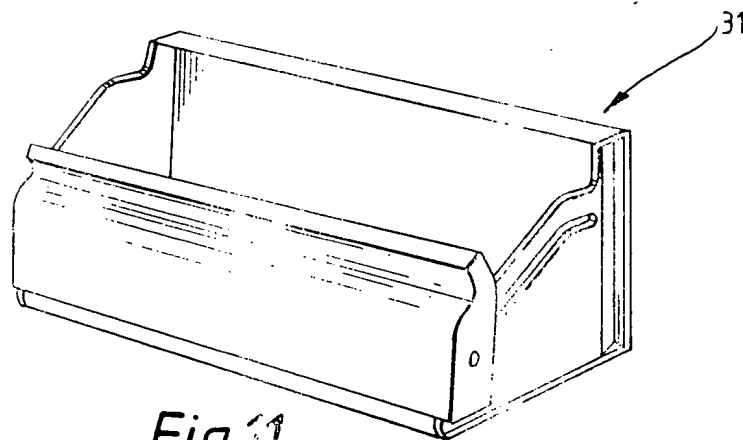


Fig. 11.

## SPECIFICATION

**Storage container and fastener assembly for cars**

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This invention relates to a storage container and fastener assembly for car interiors.

Car interiors are normally provided with such means of storage as lidded glove lockers in the fascia panel, parcel shelves below the fascia panel, and trays or pockets in doors. Horizontal recessed areas may also be incorporated in the top of the fascia panel, or as part of the transmission tunnel cover.

Nevertheless, these means frequently provide inadequate storage for all the items which the occupants wish to carry inside the car. Other receptacles, such as small cases, shopping bags and handbags, may therefore be used as well, but these are generally of inconvenient shape, often obstruct the occupants' normal posture, and may cause discomfort. Furthermore, they are not secured to the car, and thus are prone to movement as the car corners, accelerates and brakes. Such movement may interfere with the driver's proper control of the car.

The present invention provides a storage container and a fastener assembly for detachably fixing the container to a vehicle seat, the fastener assembly being attachable to, or integral with, the vehicle seat, the container having a first wall adapted to engage with the floor of the vehicle in front of said seat, and the container having a second wall adapted to lie adjacent to the front of said seat, wherein the fastener assembly is provided with holding means for detachably holding the container.

Such a specially-shaped container rests on the floor of the car, against the front edge of the seat and below the occupant's legs. The container is releasably secured to the seat by the fastener assembly, which may be incorporated into the seat structure or be fixed to an existing seat. The fastener assembly secures the container firmly, yet allows its quick removal both for access to the seat adjustment mechanism, and to allow the container to be used outside the car as a piece of luggage.

In a preferred embodiment, the fastener assembly includes a bar which can be fixed to the frame of said seat. Preferably, the holding means is constituted by a pair of clips, each of which is pivotally mounted in a respective housing, and each of which is engageable with a respective wedge-shaped groove formed in the side faces of the container adjacent to the second wall. Advantageously, the wedge-shaped grooves are vertical grooves formed in said side faces. This permits the clips to engage with the grooves over a wide range of height positions. Conveniently, the clips and their housings are positioned at the opposite ends of the bar, and the clips are spring bi-

assed towards positions in which they can engage in the wedge-shaped grooves.

The container may be made of a rigid material, such as ABS or polypropylene. In this case, the container is formed with a top opening which is closable by means of a lid, the lid being slidably mounted on the container for movement to and fro across the top opening.

Alternatively, the second wall of the container is a rigid back plate or frame which supports a flexible bag-like member. In this case, the flexible bag-like member may be provided with a zipped-in flap.

Preferably, the bar can be fixed to the seat frame by means of brackets, formed metal strips, nuts and bolts.

The container may be provided with a carrying handle.

Specific embodiments of the invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a first form of container and a seat attachment assembly, the container being shown with its lid in the closed position;

Figure 2 is a plan view of the container of Fig. 1 secured in position;

Figure 3 is a plan view of the container of Fig. 1 after release;

Figure 4 is an enlarged view of a fastening clip forming part of the attachment assembly of Fig. 1;

Figure 5 is a schematic, partial cross-section of the container of Fig. 1 showing how its lid is connected;

Figure 6 shows means for fixing the attachment assembly of Fig. 1 to a vehicle seat;

Figure 7 is a perspective view of the first form of container, with its lid in the open position;

Figure 8 is a perspective view of a second form of container in the closed position;

Figure 9 is a perspective view of the second form of container in the open position;

Figure 10 is a perspective view of a third form of container with its lid closed; and

Figure 11 is a perspective view of the third form of container with its lid open.

Referring to the drawings, Fig. 1 shows a container 1 incorporating vertical wedge-shaped grooves 2 in each side face, the container resting on the floor 3 of a car. A horizontal bar 4, of rectangular cross-section, is fitted by brackets 5 to a car seat 6. Fastening clips 7 are provided at each end of the bar 4, the fastening clips being pivotally mounted about respective pivot pins 8 within respective housings 9 provided at the ends of the bar 4. The clips 7 are biased inwardly towards the container 1 by springs (not shown) so that they normally protrude beyond their housings 9 (as shown in Figs. 2 and 4). In order to cushion the container 1 against the bar 4, the bar is provided with buffers 10 made of

seats of cars, they may also be fitted to rear car seats or other vehicle seats whenever the seat, floor and occupant configuration permits this.

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#### CLAIMS

1. A storage container and a fastener assembly for detachably fixing the container to a vehicle seat, the fastener assembly being attachable to, or integral with, the vehicle seat, the container having a first wall adapted to engage with the floor of the vehicle in front of said seat, and the container having a second wall adapted to lie adjacent to the front of said seat, wherein the fastener assembly is provided with holding means for detachably holding the container.

2. An arrangement as claimed in claim 1, wherein the fastener assembly includes a bar which can be fixed to the frame of said seat.

3. An arrangement as claimed in claim 1 or claim 2, wherein the holding means is constituted by a pair of clips, each of which is pivotally mounted in a respective housing, and each of which is engageable with a respective wedge-shaped groove formed in the side faces of the container adjacent to the second wall.

4. An arrangement as claimed in claim 3, wherein the wedge-shaped grooves are vertical grooves formed in said side faces.

5. An arrangement as claimed in either of claims 3 and 4 when appendant to claim 2, wherein the clips and their housings are positioned at the opposite ends of the bar.

6. An arrangement as claimed in any one of claims 3 to 5, wherein the clips are spring biased towards positions in which they can engage in the wedge-shaped grooves.

7. An arrangement as claimed in any one of claims 1 to 6, wherein the container is made of a rigid material.

8. An arrangement as claimed in claim 7, wherein said rigid material is ABS or polypropylene.

9. An arrangement as claimed in claim 7 or claim 8, wherein the container is formed with a top opening which is closable by means of a lid.

10. An arrangement as claimed in claim 9, wherein the lid is slidably mounted on the container for movement to and fro across the top opening.

11. An arrangement as claimed in any one of claims 1 to 6, wherein the second wall of the container is a rigid back plate or frame which supports a flexible bag-like member.

12. An arrangement as claimed in claim 11, wherein the flexible bag-like member is provided with a zipped-in flap.

13. An arrangement as claimed in claim 2, or in any one of claims 3 to 12 when appendant to claim 2, wherein the bar can be fixed to the seat frame by means of brackets,

65 formed metal strips, nuts and bolts.

14. An arrangement as claimed in any one of claims 1 to 13, wherein the container is provided with a carrying handle.

15. A storage container and fastener assembly combination substantially as hereinbefore described with reference to, and as illustrated by, the accompanying drawings.

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